



Quadratics: The affects of a, b, and c

The standard form for a quadratic equation is

$$y = ax^2 + bx + c$$

The a-value tells whether the parabolas has a maximum or minimum point.

When $a > 0$ the parabola is concave up  and has a minimum point.

When $a < 0$ the parabola is concave down  and has a maximum point.

Parabola shifts to the LEFT of the y-axis if both the "a" and "b" values have the same sign.

Parabola shifts to the RIGHT of the y-axis if the "a" and "b" values have different signs.

Parabola does NOT shift left or right if the b-value = 0.

The c-value is the y-intercept.

The greater the $|a|$ the steeper the parabola.

The smaller the $|a|$ the wider the parabola.